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THE TYPES OF THE POLYCHAETE WORMS OF THE FAMILIES POLYNOIDAE AND POLYODONTIDAE IN THE UNITED STATES NATIONAL MUSEUM AND THE DESCRIPTION OF A NEW GENUS

By Olga Hartman

A survey of the types of annelids of the families Polynoidae and Polyodontidae in the United States National Museum indicates the necessity of several nomenclatorial changes. The first part of this paper is a discussion of some of these types and a revision of some of the genera concerned. The second part lists all the types in the Museum, with changes of names and new combinations indicated. For convenience, type locality, place of publication, and museum catalog number are given.

Family POLYNOIDAE

Genus IPHIONE Kinberg

IPHIONE FUSTIS Hoagland

Figure 35, *a*

Iphione fustis Hoagland, 1920, p. 605 (U.S.N.M. no. 18941; Philippine Islands).

The type may be an immature individual, as already stated by Hoagland. The paired prostomial antennae have their cirrophores and cirrostyles subequal. The place of articulation was not indicated by the describer, but the total length is about as shown. Neuropodia are considerably more oblique that Hoagland has shown, and the neuropodial aciculum projects beyond the parapodial lobe; neurocirri are long, digitiform (fig. 35, *a*).

Genus LEPIDONOTUS Leach

LEPIDONOTUS CAELORUS Moore

FIGURE 35, *b–d*

Lepidonotus caelorus MOORE, 1903, p. 412 (U.S.N.M. no. 15733; Japan).
Polynoë spicula TREADWELL, 1906, p. 1151 (U.S.N.M. no. 5203; Monterey Bay).
Lepidonotus minutus TREADWELL, 1936, p. 262 (U.S.N.M. no. 20112; China).
? *Lepidonotus castriensis* SEIDLER, 1924, p. 41.

The type vial of *Polynoë spicula* contains three specimens. Each has 12 pairs of elytrophores, inserted as typical of the genus *Lepidonotus*. The prostomium has long anterior peaks and a stout median ceratophore; lateral antennae are inserted terminally (fig. 35, *c*). The scales are ornamented with spines and a marginal fringe (fig. 35, *d*). Neuropodial setae are distally entire and have a stout tooth

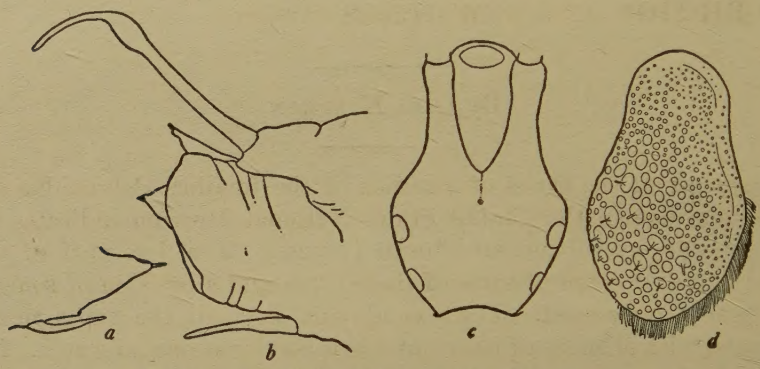

FIGURE 35.—Species of IPHIONE and LEPIDONOTUS

a, Iphione fustis Hoagland: Fifteenth neuropodium in posterior view, × 45.
b–d, Lepidonotus caelorus Moore (figures based on type of *Polynoë spicula* Treadwell): *b,* Twelfth foot in anterior view, × 45; *c,* prostomial outline, × 45; *d,* an elytron from posterior third of body, × 28.

at the distal end of the toothed region. Parapodia are blunt, truncate (fig. 35, *b*). In both the types of *L. caelorus* and *P. spicula* the posteriormost scales have the most conspicuous spines. Numerous collections show variation, however, in relative sizes of spines.

The type of *Lepidonotus minutus* Treadwell is a small representative of this common north Pacific species. The prostomium is strongly retracted into the peristomial ring, and the posterior margin is thus made out with difficulty. It may be for this reason that the illustration of *L. minutus* shows the prostomium more produced at its posterior margin than is actually the case. The elytra of the type are strongly mottled with dark gray. There is great variation in pigmentation of this species (see also Moore, 1905, p. 546). The lengths of lateral and median antennae in the original descriptions of

L. caelorus and *L. minutus* are seemingly reversed, but the degree of variation in this respect has already been commented upon (Moore, 1908, p. 331) and is observable in numerous collections examined.

Lepidonotus castriensis Seidler, from northeastern Asia, is close to, if not identical with, *L. caelorus* Moore. The descriptions agree reasonably well. Seidler describes the elytra as beset with large "Schuppen . . . die jede in der Mitte einen Höcker zeigt." The so-called "Höcker" are presumably the spines, shown by Moore (1905, fig. 36, *a–c*). Seidler has not described or illustrated the shape of a typical parapodium, but the setal structures, prostomial proportions, and elytra are similar.

LEPIDONOTUS HELOTYPUS (Grube)

Polynoë (*Lepidonotus*) *helotypus* GRUBE, 1877, p. 49 (China).
Lepidonotus robustus MOORE, 1905, p. 544 (U.S.N.M. no. 5523; Alaska).
(See Seidler, 1924, p. 56, for more complete synonymy.)

Grube's type from China measures 56 mm long; Moore's type from Shelikof Strait, Alaska, measures 45 mm. long. Seidler (1924, p. 56) indicated the possible identity of Moore's type with *L. helotypus* but gave no explanation. It seems that this synonymy may be verified in view of the similarity of the type of *L. robustus* with the description of *L. helotypus* given by Seidler, who examined Grube's type.

Genus HALOSYDNA Kinberg, char. emend.

Body moderately short, depressed; number of setigerous segments about 36; number of eltytra 18 (rarely 19), distributed on segments 2, 4, 5, 7, 9 . . . 27, 28, 30, 31, 33 (or rarely also on 34). Otherwise as defined by Kinberg.

Type of genus: *Halosydna patagonica* Kinberg, from southern Chile.

The genus *Halosydna*, as restricted above, includes the following species which I believe to be valid:

brevisetosa Kinberg (California).
latior Chamberlin (California).
nebulosa Grube (China).
pissisi (Quatrefages) (Brazil).
fuscomarmorata (Grube) (Peru).
elegans Kinberg (Galapagos Islands).
johnsoni (Darboux) (California).
mülleri (Grube) (Chile).
parva Kinberg (Chile).
patagonica Kinberg (Straits of Magellan).
leucohyba (Schmarda) (Jamaica).
virgini Kinberg (Hawaiian Islands).
marginata (Grube) (Peru).
samoensis Grube (Samoa).
tuberculifer Chamberlin (California).

The following names, described in the genus *Halosydna*, all based on specimens from California, seem to be synonyms or species in other genera:

Halosydna lagunae Hamilton (1915, p. 235) is a *Lepidonotus*.
Halosydna leioseta Chamberlin (1919b, p. 2) is *Arctonoë pulchra* (Johnson).
Halosydna macrocephala Essenberg (1917, p. 53) is *H. johnsoni* (Darboux).
Halosydna succiniseta Hamilton (1915, p. 234) is *Arctonoë vittata* (Grube).

HALOSYDNA LATIOR Chamberlin

Halosydna latior CHAMBERLIN, 1919b, p. 1 (California).
Halosydna obtusa-cirrata TREADWELL (1937b, p. 143) (Lower California).

Halosydna obtusa-cirrata Treadwell, from Lower California, compares favorably with *H. latior* Chamberlin, from southern California. *H. latior* is readily distinguished from other species of *Halosydna* by its broad depressed form and its closely imbricated, broadly reniform scales, which have a conspicuous fringe on the outer lateral border. Another characteristic feature mentioned by Chamberlin, but not described for *H. obtusa-cirrata*, is the elongate nature of the nephridial papillae; they are about three times as long as thick. I have observed this feature in numerous specimens deposited in the collections of the University of California.

Specimens of *H. latior* have been taken in abundance from the deeper waters of southern California by expeditions of the steamer *Albatross*. Many of these collections have not been reported upon. They are deposited in the University of California and the United States National Museum.

HALOSYDNA LEUCOHYBA (Schmarda)

Polynoë leucohyba SCHMARDA, 1861, p. 309 (Jamaica).
Halosydna leucohyba WEBSTER, 1884, p. 309 (Bermuda).
Halosydna brevisetosa TREADWELL, 1902, p. 166 (U.S.N.M. nos. 16009–16012) (Puerto Rico); not Kinberg, 1855, p. 385.

Specimens of *H. brevisetosa* Treadwell, from Puerto Rico, are all representatives of *H. leucohyba* (Schmarda) as redescribed by Webster. *H. brevisetosa* Kinberg is thus not known outside of the eastern Pacific.

HALOSYDNELLA, new genus

Resembling *Halosydna* Kinberg in prostomium and body contour but longer. Differs from *Halosydna* in having about 45 setigerous segments and 20 to 24 pairs of scales, inserted on segments 2, 4, 5, 7, 9 . . . 23, 25, 28, 29, 32, and on every second or third segment more posteriorly. Ventral setae distally entire or with a subterminal tooth (fig. 36, *e*). Dorsal setae finer than ventral setae and ornamented with transverse rows of spines. Notopodial setae may be absent from some posterior parapodia.

Type of genus: *Halosydna australis* Kinberg, from the La Plata River.

The following species belong to the genus *Halosydnella:*

Halosydna australis Kinberg, from the La Plata River.
Halosydna brasiliensis Kinberg, from Brazil.
Halosydna fusca Grube, from Brazil.
Halosydna alleni Day, from False Bay, South Africa.
Halosydna grisea Treadwell, from Argentina.
Polynoë punctulata Grube, from Brazil.
Halosydna galapagensis Monro, from the Galapagos Islands.
Halosydna oculata Treadwell, from Samoa.
Halosydna fusca-maculata Treadwell, from the Barbados.

A comparative study of the types of these species, especially those from the eastern coast of South America, may reveal the identity of some of them.

HALOSYDNELLA GRISEA (Treadwell), new combination

FIGURE 36, *d*, *e*

Halosydna grisea TREADWELL, 1929, p. 1 (U.S.N.M. no. 19279; Argentina).
? *Halosydna australis* KINBERG, 1855, p. 385 (La Plata River).

In the type, the lateral margin of the scales of the posterior half of the body is quite smooth, the margin of the anterior scales is successively more ciliate, the scales 2 to 8, at least, being ciliate along their entire free lateral edges, where they do not overlap one another. Neuropodia are distally truncate, extending laterally well beyond the papillate notopodium (fig. 36, *d*). Neuropodial setae number 12 to 15 in a fascicle and are arranged in two more or less irregular vertical ranks. The subterminal tooth is well outdistanced by the terminal fang (fig. 36, *e*). There are 4 to 9 transverse rows of pectinae along the thickened region.

The identity of *H. grisea* and *H. australis* seems likely in view of the similarities that are to be observed in comparing Kinberg's description and figures with the type of *H. grisea.* Both are from Argentina.

HALOSYDNELLA FUSCA-MACULATA (Treadwell), new combination

FIGURE 36, *f*, *g*

Halosydna fusca-maculata TREADWELL, 1924, p. 5 (U.S.N.M. no. 20330; West Indies).
Halosydna fuscomarginata TREADWELL, 1924 (in explanation of figures).

The type has 45 setigerous segments and 21 pairs of elytrophores. Prostomium and elytra are as indicated by Treadwell. The scales, posterior to the first pair, are tiny and leave the dorsum broadly exposed; those on a side are widely separated from one another by almost the length of a segment. I was unable to detect a subterminal

tooth in the neuropodial setae (fig. 36, *f*). Treadwell reported the presence of a subapical tooth in superior neuropodial setae. These setae have 7 to 10 rows of pectinae, restricted more completely to the outer side than in *H. grisea*. Notopodia are papillar, reduced, typically with only an aciculum (fig. 36, *g*).

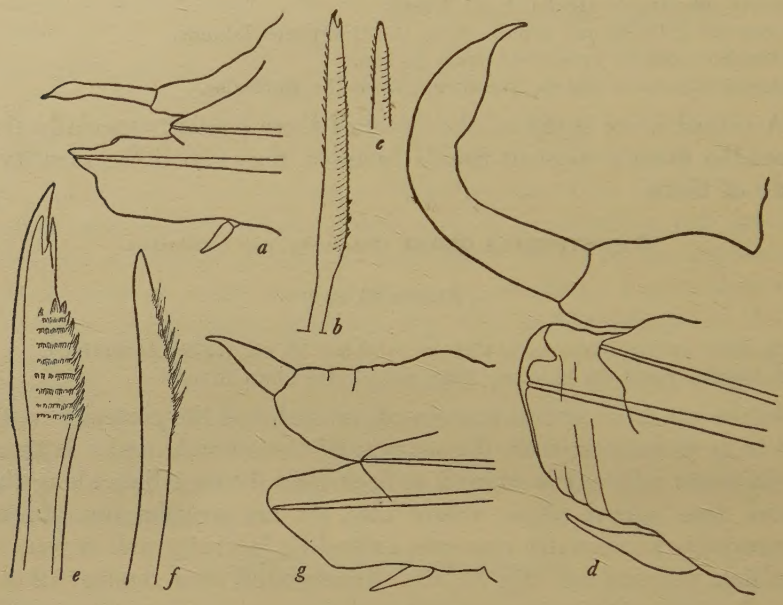

FIGURE 36.—Species of HALOSYDNELLA, new genus

a–c, Halosydnella oculata (Treadwell) : *a*, Twentieth parapodium in posterior view, × 45; *b*, a median neuropodial seta from twentieth parapodium, × 294; *c*, tip of dorsalmost neuropodial seta from twentieth parapodium, × 294.

d, e, Halosydnella grisea (Treadwell) : *d*, Twentieth parapodium in posterior view, × 45; *e*, tip of neuropodial seta from twentieth parapodium, × 294.

f, g, Halosydnella fusca-maculata (Treadwell) : *f*, Neuropodial seta from twentieth parapodium, × 294; *g*, twentieth parapodium in posterior view, × 45.

Unidentate neuropodial setae have been described for *H. galapagensis* (Monro, 1928, p. 565). These two differ, however, in the shape of the feet, the dorsal cirrophore is notably stouter in *H. fusca-maculata*, and the notopodium is more reduced.

HALOSYDNELLA OCULATA (Treadwell), new combination

FIGURE 36, *a-c*

Halosydna oculata TREADWELL, 1926, p. 8 (U.S.N.M. no. 19141; Samoa).

The type consists of a complete specimen with 46 (possibly 47) setigerous segments and has 21 pairs of elytrophores, on segments 2, 4, 5, 7, 9 . . . 23, 26, 29, 32, 35, 38, 40, 43, 44, 45 on the right side. A typi-

cal parapodium (20th) has 60 or more neuropodial setae and only 20 or less notopodial setae. The prostomium is unique in that it is broadly subquadrate and the lateral antennae are inserted ventrolaterally (see Treadwell, 1926, fig. 9). There is a nuchal hood extending forward from the peristomium.

Neuropodial setae are long, slender, with distal bladelike portion not much wider than the stem (fig. 36, *b*); terminal end is bifid. The accessory tooth is largest in inferiormost setae (fig. 36, *b*), hardly visible in the superiormost setae (fig. 36, *c*). Transverse rows of pectinae are numerous on the cutting edge but exceedingly fine; these are accompanied with a few heavier teeth on median and ventral bristles; the opposite edge or back, has a row of teeth (fig. 36, *b*). Notopodial setae include a few straight, smooth, acicular rods and more numerous straight setae resembling the superiormost neuropodial setae but apparently entire at the tip, and with fainter rows of pectinae.

Genus HYPERHALOSYDNA Augener

HYPERHALOSYDNA STRIATA (Kinberg)

Lepidonotus striatus Kinberg, 1855, p. 384 (Australia).
Polynoë platycirrus McIntosh, 1885, p. 111 (Australia).
Hylosynda carinata Moore, 1903, p. 417 (U.S.N.M. no. 15732; "off Japan").

This species has been well described by Moore and by Augener (1922, p. 4; 1927, p. 105). It is present in the tropical and subtropical Pacific.

Genus LEPIDASTHENIA Malmgren

LEPIDASTHENIA LUCIDA (Treadwell), new combination

Figure 37 *a-c*

Polynoë lucida Treadwell, 1906, p. 1150 (U.S.N.M. no. 5202; off Hawaiian Islands).

The type is a fragment consisting of the head and 64 setigerous segments; a posterior portion is missing. Lateral antennae are inserted terminally. The notopodia are greatly reduced (fig. 37, *a*), without setae but with a slender aciculum. Neuropodia are elongate, deepest subterminally, with presetal and postsetal lobes broadly triangular and about equally long (fig. 37, *a*).

Neuropodial setae are of two kinds: A few very slender, superior setae (fig. 37, *c*) and a fan-shaped fascicle of numerous thicker setae (fig. 37, *b*). Peristomium has a nuchal hood that extends forward over the prostomium, its enterior margin in line with the anterior margin of the posterior pair of eyes.

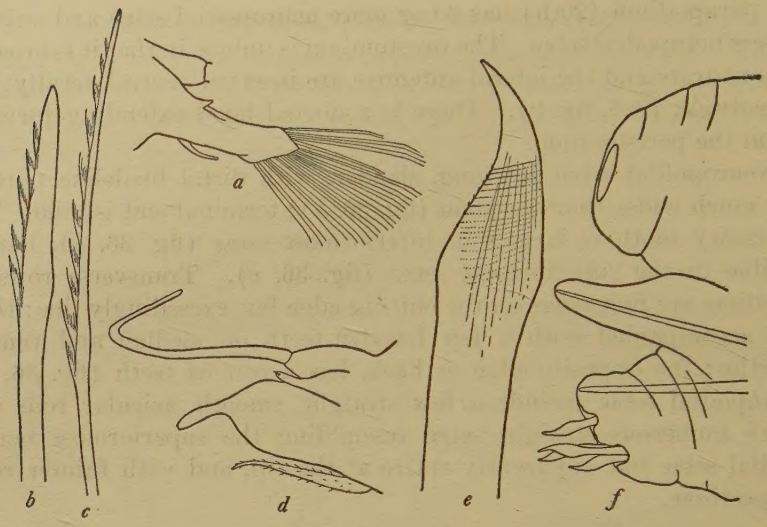

FIGURE 37.—Species of LEPIDASTHENIA, EUNOË, and ARCTONOË

a–c, Lepidasthenia lucida (Treadwell) : *a,* Thirty-fifth parapodium in anterior view, setae diagrammatically represented, dorsal cirrus lost, × 28 ; *b,* tip of inferior neuropodial seta from thirty-fifth parapodium, × 294 ; *c,* tip of superior neuropodial seta from thirty-fifth parapodium, × 294.

d, Eunoë eura Chamberlin : Fourteenth parapodium in anterior view, × 28.

e, f, Arctonoë tuberculata (Treadwell) : *e,* Tip of neuropodial seta from tenth parapodium, × 294 ; *f,* tenth parapodium in anterior view, dorsal cirrus lost, × 45.

LEPIDASTHENIA ALBA (Treadwell), new combination

Polynoë alba TREADWELL, 1906, p. 1149 (U.S.N.M. no. 5201 ; Honolulu).

The type compares favorably with the description given for *L. longicirrata* Berkeley (1923, p. 214) except that the latter has a row of papillae on the feet between the bases of the ventral cirrus and the body wall. *L. longicirrata* Treadwell (1928, p. 460) from west of Peru is probably a *Halosydna* Kinberg. The type is deposited with the New York Zoological Society.

The type of *L. alba* differs, in part, from *L. lucida* (see above) in having shorter, blunter parapodia ; also, presetal and postsetal lobes are oblique in *L. alba*, triangular in *L. lucida.*

LEPIDASTHENIA INTERRUPTA (Marenzeller)

Halosydna interrupta MARENZELLER, 1902, p. 570 (Japan).
Polynoë semierma MOORE, 1910, p. 331 (U.S.N.M. no. 15738 ; Japan).
Lepidasthenia ocellata TREADWELL, 1936, p. 264 (U.S.N.M. no. 20113 ; China).

P. semierma Moore has long been considered a synonym of *L. interrupta* (see Moore, 1910, p. 331).

The type and description of *L. ocellata* agree favorably with the description of *L. interrupta*, which has been widely reported from the northwest Pacific.

Genus EUPHIONE McIntosh

EUPHIONE CHITONIFORMIS (Moore)

Lepidonotus chitoniformis MOORE, 1903, p. 405 (U.S.N.M. no. 15646; Japan).
?*Lepidonotus branchiferus* MOORE, 1903, p. 409 (U.S.N.M. no. 15721; Japan).
(See Seidler, 1924, p. 108).

Lepidonotus chitoniformis Moore has been transferred correctly to the genus *Euphione* by Seidler (1922, 1924). Seidler, furthermore, considered *L. branchiferus* identical with *L. chitoniformis*. The type specimens, however, differ from one another in the character of the major spines on the elytra. In *E. chitoniformis* these spines are nodular, the 6 to 15 blunt nodes produced about the tip of a club-shaped stalk in which the stem is generally smooth. In *E. branchiferus* the major spines are closely covered with sharp-pointed stellate spinelets, which are continued on the stalk and on the terminal knob. Both types were collected from almost the same depth (49–63 and 34–41 fathoms, respectively) from Sagami Bay.

Genus ARCTONOË Chamberlin, char. emend.

Arctonoë CHAMBERLIN, 1920, p. 6B.
Includes *Halosydnoides* SEIDLER, 1924; *Halosydna* KINBERG (pars); *Polynoë* (pars); *Lepidonotus* (pars); *Acholoë* (pars).

Body depressed, moderately long, consisting of a varying number of segments, ranging from 39 [?] to 60 or more. Elytra 18 pairs or more, continued to end of body but often leaving a broad dorsal area exposed, inserted as in *Halosydna* Kinberg on the first 26 segments, insertion more or less irregular more posteriorly. Last few pairs of scales usually small, delicate. Prostomium much as in *Halosydna*, except that the eyes may be reduced or absent and the lateral paired antennae inserted somewhat ventrolaterally.

Parapodia unequally biramous, the smaller notopodium provided with an aciculum and few or no setae; notopodial setae straight, slightly pectinated or quite smooth, distal end blunt, indiscretely bifid. Neuropodia often robust, though short, truncate, each provided with a heavy aciculum and few to many stout, falcate setae, lacking pectinae or with faint transverse rows of teeth. Falcate setae are sometimes accompanied by a few superior neurosetae resembling those of the notopodium. Ventral cirri present on at least the first two segments, those of the first resembling the dorsal cirri, with a subterminal knob, those of the second cirriform. Ventral cirri of other segments moderate to inconspicuous or absent. Dorsal cirri more or less similar throughout.

Elytra soft, translucent, with few or no spines or nodules, lateral margins smooth to greatly frilled, lacking noticeable cilia or hairs.

Commensal, in ambulacral grooves of echinoderms or branchial chambers of mollusks.

Type species: *Arctonoë vittata* (Grube), new combination.

Discussion.—The genus *Arctonoë* includes a small group of annelids that differ, by degrees, in the reduction or loss of certain parts, such as the number of notopodial setae, presence or absence of ventral cirri, number of segments and of scales, size of eyes. The habit of commensalism is possibly largely responsible for certain of these reductions or deletions. All known species are similar in that they have the peculiar, heavy, falcate neuropodial setae adapted for attaching to their hosts, and in other respects enumerated above.

The first species of this group, *Polynoë vittata*, was described from Alaska by Grube (1855, p. 82). It has subsequently been delegated to the genera *Lepidonotus* (Baird, 1863, p. 107), *Halosydna* (Baird, 1865, p. 190), *Acholoë* (Marenzeller, 1902, p. 576), and *Halosydnoides* (Seidler, 1921, p. 134). It has been described as *Lepidonotus lordi* Baird (1863, p. 107), as *Halosydna succiniseta* Hamilton (1915, p. 234 [new syn.]), and more recently as *Arctonoë lia* Chamberlin (1920, p. 6B [new syn.]). Since Chamberlin's name *Arctonoë* precedes *Halosydnoides* Seidler (1924), the former is used.

There are now four known species that may be assigned to the genus *Arctonoë*. They are: *Polynoë vittata* Grube (1855, p. 82), *Lepidonotus fragilis* Baird (1863, p. 108), *Polynoë pulchra* Johnson (1897, p. 177), and *Harmothoë tuberculata* Treadwell (1906, p. 1154) (see below). The first three of these have not been reported outside of the north Pacific, and *A. pulchra* and *A. fragilis* are known only in the northeast Pacific. *A. tuberculata* is known only from the Hawaiian Islands (Treadwell, 1906).

An interesting correlation of host species may be observed. All are more or less commensal with asteroids. *A. vittata* is more commonly with fissurellids, though sometimes also on chitons and even in tube of *Thelepus* (Berkeley, 1935, p. 212). *A. pulchra* is more frequently with holothuroids.

KEY TO THESE SPECIES OF ARCTONOË

1. Dorsum of each segment with a conspicuous median papilla; notopodial setae absent; neuropodial setae with vestiges of pectinae (fig. 37, *e*) ---------- tuberculata
   Dorsum without such papillae; notopodial setae present on at least a few anterior segments though often reduced in size and number; neuropodial setae without pectinae ---------- 2
2. External margins of elytra greatly ruffled or folded ---------- fragilis
   External margins of elytra smooth or only slightly ruffled ---------- 3
3. Some superior neurosetae with bifid tip; dorsum usually with a dark pigment band across segments 7–8 ---------- vittata
   Superior neurosetae resembling inferior ones; dorsum without transverse band of pigment ---------- pulchra

ARCTONOË TUBERCULATA (Treadwell), new combination

FIGURE 37, *e*, *f*

Harmothoë tuberculata TREADWELL, 1906, p. 1154 (U.S.N.M. no. 5205; Hawaii).

The type is an ovigerous adult, its total length about 15 mm, its greatest width between segments 12 and 14 about 3 mm. All elytra and dorsal cirri have been lost. Ventral cirri of the first two segments remain and are moderately developed, as typical of the genus *Arctonoë*, defined above. The ventral cirri are completely lacking (fig. 37, *f*). Parapodia are short, broad, thick, similar throughout. The notopodium is reduced to a fingerlike lobe, extending distally beyond the neuropodium (fig. 37, *f*), provided with a slender aciculum and a few (3 to 6) falcate setae, smooth along their lateral margins except for a few closely set, transverse rows of minute pectinae in the subterminal region (fig. 37, *e*).

The prostomium is macerated, its anterior appendages not discernible, its posterior margin partly overlapped by a peristomial nuchal hood.

Genus HARMOTHOË Kinberg

HARMOTHOË ACULEATA Andrews

Harmothoë aculeata ANDREWS, 1891, p. 278 (U.S.N.M. no. 4876; North Carolina).

The type vial contains several specimens, 7 with anterior ends of which 3 are more or less complete. Total number of setigerous segments varies from 34 to 36. *H. aculeata* resembles the European *H. areolata* Grube; the areolations of the elytra, however, are much less marked in *H. aculeata*, and the spines of the first pair of scales are shorter than those more posteriorly. A characteristic feature is the neuropodial lobe, which is prolonged into a slender, dorsal, attenuated tip (see Andrews, 1891, fig. 3).

HARMOTHOË VILLOSA Treadwell

Harmothoë villosa TREADWELL, 1926, p. 10 (U.S.N.M. no. 19190; Samoa).

Both dorsal and ventral cirri are hirsute, as are also the prostomial antennae. Palpi are smooth. This species approaches *H. hirsuta* Johnson in the character of its prostomium and appendages, its notopodial and neuropodial setae, and the proportions of the parapodia. The elytra are ciliate along their outer, lateral margins and spiny, but there are no definite polygonal areas such as Johnson first described for *H. hirsuta* (Johnson, 1897).

Ditlevsen (1917, p. 36) assigned *Eucranta villosa* Malmgren (1865, p. 80) to the genus *Harmothoë*. This species is a *Eucranta* Malmgren.

HARMOTHOË TRIMACULATA (Treadwell), new combination

FIGURES 38, *a*; 39, *a*, *b*

Evarnella trimaculata TREADWELL, 1924, p. 6 (U.S.N.M. no. 20326; West Indies).

The type of this species has been deposited in the United States National Museum by the University of Iowa. It is being allocated to the genus *Harmothoë* because of the similarity of the neuropodial setae with one another and the anterior position of the eyes. Parapodia are long, extending laterally considerably beyond the scales (fig. 38, *a*). Dorsal and ventral cirri are hirsute. The neuroacicular lobe is prolonged in a papillar lobe. A typical parapodium (12th) is provided with about 12 stout, pectinated notopodial setae (fig. 39, *b*) and about 10 slightly slenderer, bifid neuropodial setae (fig. 39, *a*). The ventralmost neuropodial setae have the pectinated region more limited than those more dorsally; it is only about half as long as that of the dorsalmost setae.

H. trimaculata resembles *H. variegata* Treadwell (1917, p. 260) from Florida. I have not seen the type of the latter. The elytral color markings are somewhat different, the anterior eyes much smaller, and the parapodia said to be shorter, but whether these differences are real or of no significance is not certain.

HARMOTHOË TENEBRICOSA Moore

Harmothoë tenebricosa MOORE, 1910, p. 351 (U.S.N.M. no. 16877; California).
Eunoë exoculata TREADWELL, 1923, p. 4 (U.S.N.M. no. 19148; Lower California).

Eunoë exoculata is identical with *Harmothoë tenebricosa*. The general aspect of *E. exoculata* is darker and the setae are a deeper amber color. A paratype of *H. tenebricosa* (U.S.N.M. no. 17153) is somewhat darker than the type but not so dark as *E. exoculata*. In other respects the two types are very similar. The characteristic neuropodial lobes, setae, and prostomium readily distinguish this species (cf. figures of Moore, 1910, and Treadwell, 1923).

HARMOTHOË TRIANNULATA Moore

Harmothoë triannulata MOORE, 1910, p. 346 (U.S.N.M. no. 17154; California).
? *Harmothoë bonitensis* ESSENBERG, 1917, p. 48 (California).

The description of *H. bonitensis* agrees reasonably well with that of *H. triannulata*. I have seen Essenberg's type at the University of California and Moore's type at the National Museum but have not compared them side by side.

Genus EUNOË Malmgren

EUNOË (?) CRASSA (Treadwell), new combination

FIGURE 38, *b–e*

Lagisca crassa TREADWELL, 1924, p. 1 (U.S.N.M. no. 19101, Chile).

The type is a fragment consisting of 32 anterior segments. The last segment is provided with the fifteenth elytrophore. I could discern no bifid neuropodial setae. The dorsalmost resembled the ventralmost (figs. 38, *d*, *e*) except for the decreasing length of blade and the

FIGURE 38.—Species of HARMOTHOË and EUNOË

a, Harmothoë trimaculata (Treadwell): Twelfth parapodium in anterior view, notopodial setae indicated, uppermost and lowermost neurosetae shown, × 38.

b–e, Eunoë crassa (Treadwell): *b*, Prostomium and surrounding parts, × 23; *c*, tip of notopodial seta from a median parapodium, × 75; *d*, inferiormost neuropodial seta from same parapodium, × 75; *e*, superiormost neuropodial seta from same fascicle as *d*, × 75.

smaller size of the ventral bristles. The few scales that remain (the left on segments 4, 5, and 7 and a pair on 29) are tough, firmly attached, suborbicular and partly overlain, laterally, by the fascicles of spinelike notopodial setae.

Anterior pair of eyes are directed forward; the base of the paired prostomial antennae is over half as long as the main portion of the style. Palpi, antennae, and cirri are smooth (fig 38, *b*). Acicula and setae are dark amber, but the distal ends of the acicula are darker and project beyond the acicular lobes. Notopodial setae are entire distally, the transverse rows of pectinae fine, numerous, and extensive in width (fig. 38, *c*).

EUNOË EURA Chamberlin

FIGURE 37, *d*

Eunoë eura CHAMBERLIN, 1919a, p. 58 (U.S.N.M. no. 19355, Peru).

Notopodial and neuropodial setae are slender, about equally thick, with extensive pectinated region. Acicular lobes of both notopodia and neuropodia are long, digitate throughout (fig. 37, *d*). The notoaciculum emerges near the tip of the lobe, the neuroaciculum about halfway on the free length of the lobe. Ventral cirri are ciliate, dorsal cirri smooth.

Genus ENIPO Malmgren

ENIPO CIRRATA Treadwell

FIGURE 39, *d*, *e*

Enipo cirrata TREADWELL, 1925, p. 1 (U.S.N.M. no. 19139, Alaska).

Notopodial setae are reduced in number; there are few (5 to 6) in anteriormost parapodia (5 in the third foot), and they decrease gradually in number to the twelfth segment, where only an aciculum is present. Notosetae, where present, are short, stout, finely pectinated, with tip entire (fig. 39, *e*). Dorsal cirri are unusually elongate beyond the bulbous region (fig. 39, *d*). The acicular lobes of notopodia and neuropodia are produced, but the acicula do not extend beyond the fleshy lobes.

Genus SCALISETOSUS McIntosh

SCALISETOSUS FORMOSUS Moore

FIGURE 39, *c*

Scalisetosus formosus MOORE, 1903, p. 403 (U.S.N.M. no. 16165, Japan).

It is likely that *S. formosus* and *S. praelongus* Marenzeller (1902, p. 575), from south Japan, are identical. The parapodial and setal outlines are similar except that in *S. formosus* the neuroacicular lobes are somewhat spatulate distally (fig. 39, *c*) and seemingly tapering in *S. praelongus*. Ventral cirri in both are short, inserted proximally on the foot (fig. 39 *c*).

Genus INTOSHELLA Darboux

INTOSHELLA COECA (Moore), new combination

Harmothoë (*Eunoë*) *coeca* Moore, 1910, p. 338 (U.S.N.M. no. 17476, California).

The type has two pairs of eyes faintly discernible, an anterior pair at the lateral margins where the prostomium is widest and a posterior pair near the posterior margin of the prostomium. All are pale, small, and about equal in size.

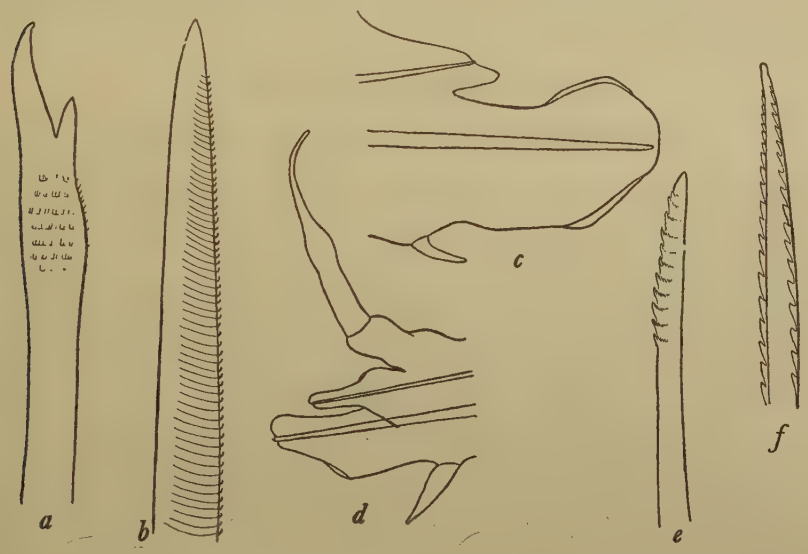

Figure 39.—Species of Harmothoë, Scalisetosus, Enipo, and Macellicephala

a, b, Harmothoë trimaculata (Treadwell): *a,* Inferiormost neuropodial seta from twelfth parapodium, × 245; *b,* one of the stouter notopodial setae from twelfth parapodium, × 245.

c, Scalisetosus formosus Moore: Parapodium, probably from median part of body, in anterior view, × 38.

d, e, Enipo cirrata Treadwell: *d,* Third parapodium in posterior view, × 38; *e,* notopodial seta from third parapodium, × 245.

f, Macellicephala aciculata (Moore): Notopodial seta, × 245.

The genus *Intoshella* has been known for only one species, *I. euplectellae* McIntosh (1885, p. 108) from the Philippine Islands. From that species *I. coeca* differs in the shape of the prostomium and in having the palpi long, tapering, about twice as long as the lateral antennae, and much thicker. *I. coeca* is about 40 mm long; *I. euplectellae* is only about half that long.

Genus MALMGRENIA McIntosh

MALMGRENIA NESIOTES (Chamberlin), new combination

Polynoë nesiotes CHAMBERLIN, 1919a, p. 72 (U.S.N.M. no. 19460, Lower California).

The type has the following characters, which agree with the genus *Malmgrenia:* Lateral antennae are inserted terminally and they are smaller than the median antenna; there are 15 pairs of scales, covering the dorsum; there are only 34 segments, but the type is in two pieces, and may be incomplete in the midregion. Chamberlin's description is as complete as is possible with the material.

Genus MACELLICEPHALA McIntosh

MACELLICEPHALA REMIGATA (Moore), new combination

Polynoë (?) remigata MOORE, 1910, p. 365 (U.S.N.M. no. 17220, California).

This species, like the one following, consists of 18 setigerous segments. The prostomium consists of a pair of subglobular lobes, the posterior margin more or less flattened, the dorsoanterior margins each with a minute, papillar, prostomial peak. Lateral antennae are probably absent. Moore (1910, p. 365) mentions the swellings just ventral to the prostomial peaks and says that they "probably represent the bases of the lateral tentacles." They seem, more likely, however, to be fleshy swellings which never had attached antennae.

Neuropodial setae are serrated along one margin only, as in *M. mirabilis* McIntosh. It is likely that *M. remigata* and *M. mirabilis* are identical. The latter has been widely reported (New Zealand, north Atlantic, south Pacific, Hawaiian Islands, etc.). *M. remigata* was dredged off Santa Catalina Island.

MACELLICEPHALA (?) ACICULATA (Moore), new combination

FIGURE 39, *f*

Polynoë (?) aciculata MOORE, 1910, p. 367 (U.S.N.M. no. 17405, California).

The single type specimen is considerably macerated. It consists of 18 setigerous segments; the prostomium is strongly bilobed, with a pronounced median fissure. Eyes are lacking, and no trace of lateral antennae can be made out. The notopodium is greatly reduced and the few small dorsal setae are smooth. Neuropodial setae are long, flattened, transparent, and serrated along two sides (fig. 39, *f*).

Genus ADMETELLA McIntosh

ADMETELLA RENOTUBULATA (Moore), new combination

Polynoë (?) *renotubulata* Moore, 1910, p. 368 (U.S.N.M. no. 16878, California).

Moore has already indicated the relation of this species with those of the genus *Admetella*. The type is notably smaller than those of two other species in the collections of the Museum, *A. dolichopus* and *A. hastigerens* Chamberlin. Also, it has only 35 segments and 14 pairs of scales as against the 60–75 segments and 23–30 pairs of scales usually present. Moore's type may possibly represent an immature specimen.

Genus Indeterminable

Polynoë (*?*) *filamentosa* Moore (1910, p. 366, U.S.N.M. no. 17221), from California, is unique in its parapodial structures. The notopodium is well developed; notopodial setae are pale amber, heavier than the neuropodials and some quite as long. Neuropodial setae are flat, thin, transparent, somewhat resembling those in *Macellicephala*. The prostomium is more than twice as broad as long, and apparently without eyes. The median ceratophore is stout, produced between the prostomial lobes and extends distally to the ends of the tiny papillalike prostomial peaks. The single type is fragmentary and does not permit a complete description.

Polynoë innatans Chamberlin (1919a, p. 70, U.S.N.M. no. 19459), from near the Galapagos Islands, is perhaps a species of *Eucranta* Malmgren. It is tiny, only 9.5 mm long, translucent, and without indication of sexual products; thus it may be an immature pelagic stage. The type resembles *Eucranta* as defined by Monro (1936, p. 100) in that (1) the notopodial setae are stouter than the neuropodials, (2) the neurosetae are of two kinds, both bidentate distally, and (3) the superior neuropodial setae are long, slender, pectinated, the inferior are stouter, shorter. The prostomium is harmothoid. There are only 26 setigerous segments and 11 (or possibly 12) elytrophores.

Family POLYODONTIDAE

Genus EUPANTHALIS McIntosh

EUPANTHALIS MUTILATA (Treadwell), new combination

Figures 40, *a–f*

Polynoë mutilata Treadwell, 1906, p. 1152 (U.S.N.M. no. 5204, Hawaiian Islands).
? *Eupanthalis oahuensis* Treadwell, 1906, p. 1155 (Hawaiian Islands).

I have not seen the type of *Eupanthalis oahuensis*. There is no record of the deposition of this type in the National collections.

The following description is based on the type of *P. mutilata*. The specimen consists of head and 78 segments, in two pieces. The head

is macerated; the posterior end is lacking. Setae are of four kinds as characteristic of the genus *Eupanthalis*, a typical parapodium has 5 to 12 geniculate pointed setae (fig. 40, *a*) in the ventralmost part of the fascicle, about 10 spinelike aristate setae (fig. 40, *d*), 1 or 2 penicillate setae (fig. 40, *c*), and a few fine capillary setae (fig. 40, *b*) in the superiormost part of a fascicle. The notopodium has a slender aciculum.

FIGURE 40.—EUPANTHALIS MUTILATA (Treadwell)

a, Inferior pointed neuroseta, × 294; *b*, superiormost seta, × 294; *c*, bushy-topped seta, × 294; *d*, tip of acicular, bayonet seta, × 294; *e*, lower right jaw piece from inner side, × 50; *f*, tenth parapodium with parapodial cord turned to the side, setae diagrammatically indicated, × 45.

The parapodial cord is a long, brown, stiff structure, terminating at its proximal end in a coil of four or five turns within the body wall (fig. 40, *f*). The four jaws are similar, the lower pieces each with about 18 low, lateral teeth in addition to the main fang (fig. 40, *e*). Elytra are pale, translucent, smooth. They are orbicular along their anterior and median sides, but along their posterolateral margin they are turned up so as to form a pouch, open dorsally.

Polynoë mutilata was taken from the same station, at the same time, as was *Eupanthalis oahuensis*. The two appear to be identical. The former name is being retained because its type is extant.

EUPANTHALIS MACULOSA (Treadwell), new combination

Macellicephala maculosa TREADWELL, 1931, p. 313 (U.S.N.M. no. 19543, Philippine Islands).

The type is a fragment of 64 segments; a posterior piece is lacking. Its setal, prostomial, and parapodial structures align it with the Polyodontidae. The body is long, vermiform. Eyes are sessile; lateral antennae are inserted terminally, and the median antenna is near the posterior margin of the prostomium. Parapodia are provided with glandular fibers. In these respects it agrees with *Eupanthalis*.

Genus POLYODONTES Renier

POLYODONTES OCULEA (Treadwell)

Panthalis oculea TREADWELL, 1902, p. 188 (U.S.N.M. no. 15961, West Indies).
Polyodontes oculea MONRO, 1928, p. 572.

This species has been redescribed and assigned to this genus by Monro. Treadwell's illustration of the length of lateral prostomial antennae is practically as in the specimen; hence these appendages are notably longer than those in Monro's specimens. The absence of penicillate setae and the presence of a prostomial caruncle are characteristic of the type.

Genus EUPOLYODONTES Buchanan

EUPOLYODONTES ELONGATA (Treadwell), new combination

FIGURE 41, *a–d*

Iphionella elongata, TREADWELL, 1931, p. 315 (U.S.N.M. no. 19544, Philippine Islands).

The prostomium consists of two rounded lobes separated by a median depression. Each half has a large anterior eye directed anteriorly and a smaller dorsolateral eye on the posterior half of the lobe (fig. 41, *a*). Paired antennae are inserted terminally; they are long, slender, with a slight subterminal enlargement (fig. 41, *a*). No nuchal tentacle or papilla has been distinguished. First segment (peristomial) is apparently without setae.

Elytra are broadly orbicular, with a shallow indentation near the anteroectal margin; the margin is entire but slightly ruffled along the median or also the outer edges; the point of insertion is far to the side (fig. 41, *b*). Elytrophores are present as follows: On 2 (first setigerous segment), 4, 5, 7, 9, . . . and on all alternate segments at least to 43.

The lateral extensions of the jaw pieces have teeth as follows: 4 above and 5 below on the right side, and 5 above and 4 below on the left side. Setae are of 3 kinds (description based on a 10th parapodium); A superior fan-shaped fascicle of 30–35 long, pointed serrulated setae and a similar fascicle in the inferior part of the neuropodium, (2) an anterior fan-shaped fascicle of finer, shorter bristled capillaries (fig. 41, *d*) in front of the serrulated setae, and (3) about 8 stout, aristate spines (fig. 41, *c*) in a posterior series. No plumose setae have been observed.

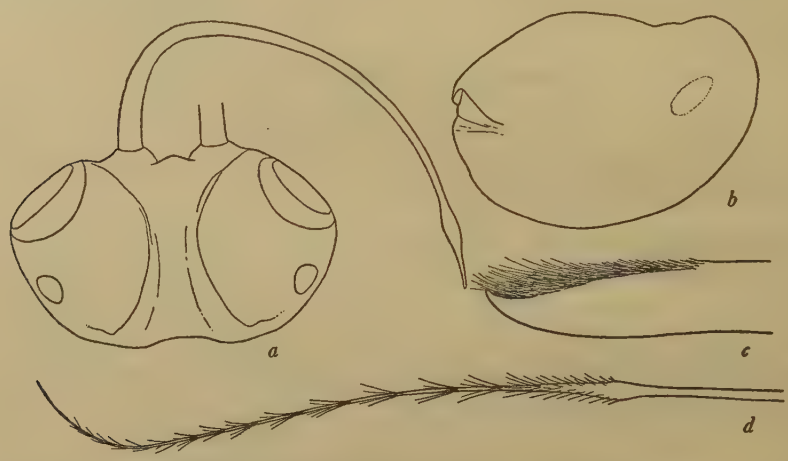

FIGURE 41.—EUPOLYODONTES ELONGATA (Treadwell)

a, Prostomium in dorsal view with left lateral antenna turned unnaturally to right, × 45; *b*, eleventh right elytron in dorsal view, elytral scar indicated in dotted outline, × 28; *c*, tip of stout aristate seta from tenth parapodium, the distal style probably lost, × 294; *d*, tip of slender capillary seta in anterior fascicle from tenth parapodium, × 294.

Genus PANTHALIS Kinberg

PANTHALIS ADUMBRATA Hoagland

Panthalis adumbrata HOAGLAND, 1920, p. 606 (U.S.N.M. no. 18944, Philippine Islands).

Panthalis helleri HOLLY, 1934, p. 148 (Philippine Islands).

The description of *P. helleri* compares favorably with that of *P. adumbrata*. Holly has given good illustrations of the characteristic elytra as well as the setae.

PANTHALIS PANAMENSIS Chamberlin

Panthalis panamensis CHAMBERLIN, 1919, p. 86 (U.S.N.M. no. 19431, Panama).

This species resembles *P. adumbrata* in having stalked ommatophores. It is smaller, however, probably less than 50 mm long; the elytra lack the black edges, and the prostomium is widest in the

posterior half instead of having its sides almost parallel as in *P. adumbrata*. The jaw pieces of *P. panamensis* have 5 erect lateral teeth, those of *P. adumbrata* have 7 blunt teeth.

PANTHALIS EVANIDA (Treadwell), new combination

Eupanthalis evanida Treadwell, 1926, p. 186 (U.S.N.M. no. 19208, Philippine Islands).

This species has globular ommatophores as characteristic of the genus *Panthalis*. Parapodial glands are present from the eighth setigerous segment as in *P. oerstedi* Kinberg. The two may be identical.

Family APHRODITIDAE

Genus HERMIONE Blainville

HERMIONE TROPICUS (Treadwell), new combination

Melaenis tropicus Treadwell, 1934, p. 1 (U.S.N.M. no. 20031, Virgin Islands).

This was originally described as a polynoid, but the type has the characteristic features of the genus *Hermione*, of the family Aphroditidae. It is colorless except for the pale amber, stout spines. There are 15 pairs of soft, imbricated scales; ventral setae are distally falcate, laterally with a few stout teeth; notopodial setae include some barbed, arrow-headed. The prostomium has a single median antenna and a pair of anterior peduncled eyes. These are indicated in the original figure as the bases of a pair of lateral tentacles.

LIST OF TYPES OF POLYNOIDAE AND POLYODONTIDAE IN THE UNITED STATES NATIONAL MUSEUM, WITH CHANGES OF NAME AND NEW COMBINATIONS

(Bibliographic source, Museum catalogue number, and type locality are given for ready reference. Synonyms are enclosed in brackets. Species discussed in the first part of this paper are followed by an asterisk.)

Admetella dolichopus CHAMBERLIN (1919a, p. 67, pl. 10, fig. 1; U.S.N.M. no. 19325; western Mexico).

Admetella hastigerens Chamberlin (1919a, p. 64, pl. 9, figs. 6–8; U.S.N.M. no. 19326; Central America).

Admetella renotubulata, new combination, for *Polynoë renotubulata* Moore.*

Antinoë anoculata MOORE (1910, p. 358, pl. 30, figs. 34–40; U.S.N.M. no. 16882; California).

Antinoë macrolepidia MOORE (1905, p. 538, pl. 35, figs. 21–23; U.S.N.M. no. 5509; Alaska).

Arctonoë tuberculata, new combination, for *Harmothoë tuberculata* Treadwell.*

Enipo cirrata TREADWELL (1925, p. 1, figs. 1–4; U.S.N.M. no. 19139; Alaska).*

Enipo gracilis VERRILL (1874, p. 407, pl. 5, fig. 3; Maine).

Eunoë (?) *crassa*, new combination, for *Lagisca crassa* Treadwell.*

Eunoë depressa MOORE (1905, p. 536, pl. 34, figs. 17, 18; pl. 35, figs. 19, 20; U.S.N.M. no. 5590; Alaska).

Eunoë eura CHAMBERLIN (1919a, p. 58, pl. 3, figs. 2–6; U.S.N.M. no. 19355; Peru).*

[*Eunoë exoculata* TREADWELL] (1923, p. 4, figs. 1–4; U.S.N.M. no. 19148; Lower California). See *Harmothoë tenebricosa.**

Eunoë spinulosa VERRILL (1879, p. 169; U.S.N.M. no. 7758; Nova Scotia).

[*Eupanthalis evanida* TREADWELL] (1926, p. 186, figs. 6–12; U.S.N.M. no. 19208). See *Panthalis evanida.**

Eupanthalis mutilata, new combination, for *Polynoë mutilata* Treadwell.*

Euphione chitoniformis (MOORE); includes *Lepidonotus chitoniformis* and possibly *L. branchiferus* Moore.*

Eupolyodontes elongata, new combination, for *Iphionella elongata* Treadwell.*

[*Evarnella trimaculata* TREADWELL] (1924, p. 6, figs. 1–3; U.S.N.M. no. 20326; Barbados). See *Harmothoë trimaculata.**

Gattyana senta MOORE (1902, p. 259, pl. 13, figs. 1–13; U.S.N.M. no. 5598; Alaska).

[*Halosydna fusca-maculata* TREADWELL] (1924, p. 5, figs. 5–9; U.S.N.M. no. 20330; Barbados). See *Halosydnella fusca-maculata.**

[*Halosydna fuscomarginata* TREADWELL] (1924, in explanation of figures). See *Halosydnella fusca-maculata.**

[*Halosydna grisea* TREADWELL] (1929, p. 1, figs. 1–6; U.S.N.M. no. 19279; Argentina). See *Halosydnella grisea.**

Halosydna nebulosa GRUBE (1877, p. 49; China); includes *Halosydna vexillarius* Moore (see Seidler, 1924, p. 110).

[*Halosydna vexillarius* MOORE] (1903, p. 415, pl. 23, figs. 13–15; U.S.N.M. no. 15730; Japan). See *Halosydna nebulosa.*

Halosydnella fusca-marginata, new combination, for *Halosydna fusca-marginata* Treadwell.*

Halosydnella grisea, new combination, for *Halosydna grisea* Treadwell.*

Halosydnella oculata, new combination, for *Halosydna oculata* Treadwell.*

Harmopsides natans CHAMBERLIN (1919a, p. 48, pl. 6, figs. 1–5; U.S.N.M. no. 19720; Peru).

Harmothoë aculeata ANDREWS (1891, p. 278, pl. 12, figs. 1–5; U.S.N.M. no. 4876; North Carolina).

[*Harmothoë* (*Eunoë*) *coeca* MOORE] (1910, p. 338, pl. 28, figs. 7–12; U.S.N.M. no. 17476; California). See *Intoshella coeca*.*

Harmothoë (*Evarne*) *fragilis* MOORE (1910, p. 353, pl. 29, figs. 29, 30; pl. 30, figs. 31–33; U.S.N.M. no. 17147; California).

[*Harmothoë levis* TREADWELL] (1937a, p. 26, figs. 1–5; U.S.N.M. no. 20222; Greenland). See *Harmothoë imbricata*.*

Harmothoë mexicana CHAMBERLIN (1919a, p. 54, pl. 1, figs. 1–9; pl. 2, fig. 1; U.S.N.M. no. 19370; western Mexico).

Harmothoë scriptoria MOORE (1910, p. 344, pl. 28, figs. 13–17; U.S.N.M. no. 17156; California).

Harmothoë tenebricosa MOORE (1910, p. 351, pl. 29, figs. 23–28; U.S.N.M. no. 16877; California).*

Harmothoë triannulata MOORE (1910, p. 346, pl. 29, figs. 18–22; U.S.N.M. no. 17154; California).

Harmothoë trimaculata, new combination, for *Evarnella trimaculata* Treadwell.*

[*Harmothoë tuberculata* TREADWELL] (1906, p. 1154; U.S.N.M. no. 5205; Hawaiian Islands). See *Arctonoë tuberculata*.*

Harmothoë villosa TREADWELL (1926, p. 10, pl. 2, figs. 14–18; U.S.N.M. no. 19190; Samoa).*

Hololepida magna MOORE (1905, p. 541, pl. 35, figs. 24–29; U.S.N.M. no. 5521; Alaska).

[*Hylosynda carinata* MOORE] (1903, p. 417; pl. 23, figs. 16, 17; U.S.N.M. no. 15732; Japan). See *Hyperhalosydna striata*.*

Hyperhalosydna striata (KINBERG) (1855, p. 384; Australia); includes *Hylosynda carinata* Moore.*

Intoshella coeca, new combination, for *Harmothoë* (*Eunoë*) *coeca* Moore.*

Iphione fustis HOAGLAND (1920, p. 605, pl. 46, figs. 4–8; U.S.N.M. no. 18941; Philippine Islands).*

[*Iphionella elongata* TREADWELL] (1931, p. 315, fig. 2; U.S.N.M. no. 19544; Philippine Islands). See *Eupolyodontes elongata*.*

[*Lagisca crassa* TREADWELL] (1924, p. 1, figs. 1–4; U.S.N.M. no. 19101; Chile). See *Eunoë crassa*.*

Lagisca impatiens WEBSTER (1879b, p. 102, pl. 1, figs. 1–7; U.S.N.M. no. 500; New Jersey).

Lagisca irritans MARENZELLER (1904, p. 92, pl. 1; U.S.N.M. no. 5231; mid-Pacific).

Lagisca lamellifera (MARENZELLER) (1879, p. 115, pl. 1, fig. 5; Japan); includes *Lagisca multisetosa papillata* Moore (see Moore, 1910, p. 341).

[*Lagisca multisetosa papillata* MOORE] (1908, p. 335; U.S.N.M. no. 5642; Alaska). See *Lagisca lamellifera*.

Lepidametria commensalis WEBSTER (1879a, p. 210, pl. 3, figs. 23–31; U.S.N.M. no. 521; Virginia).

Lepidasthenia alba, new combination, for *Polynoë alba* Treadwell.*

Lepidasthenia curta CHAMBERLIN (1919a, p. 61, pl. 5, figs. 4–9; U.S.N.M. no. 19399; western Mexico).

Lepidasthenia interrupta (MARENZELLER) (1902, p. 570, pl. 1, fig. 2; Japan); includes *Polynoë semierma* Moore and *Lepidasthenia ocellata* Treadwell.*

Lepidasthenia lucida, new combination, for *Polynoë lucida* Treadwell.*

[*Lepidasthenia ocellata* TREADWELL] (1936, p. 264, fig. 18; U.S.N.M. no. 20113; China). See *L. interrupta.**

[*Lepidonotus branchiferus* MOORE] (1903, p. 409, pl. 23, figs. 7–9; U.S.N.M. no. 15721; Japan). See *Euphione chitoniformis.**

Lepidonotus caelorus MOORE (1903, p. 412, pl. 23, fig. 13; U.S.N.M. no. 15733; Japan); includes *Polynoë spicula*, *Lepidonotus minutus*, and possibly *L. castriensis* Seidler.*

[*Lepidonotus chitoniformis* MOORE] (1903, p. 405, pl. 23, figs. 10, 11; U.S.N.M. no. 15646; Japan). See *Euphione chitoniformis.**

Lepidonotus helotypus GRUBE (1877, p. 49; China); includes *L. robustus* MOORE.*

[*Lepidonotus minutus* TREADWELL] (1936, p. 262, fig. 18; U.S.N.M. no. 20112; China). See *L. caelorus.**

Lepidonotus nesophilus CHAMBERLIN (1919a, p. 75, pl. 4, figs. 1–7; pl. 5, fig. 13; U.S.N.M. no. 19400; Galapagos Island).

[*Lepidonotus robustus* MOORE] (1905, p. 544, pl. 36, figs. 32–35; U.S.N.M. no. 5523; Alaska). See *L. helotypus.**

Lepidonotus variabilis WEBSTER (1879, p. 205; pl. 1, figs. 6–11; pl. 2, figs. 12–14; U.S.N.M. no. 431; Virginia).

Macellicephala (?) *aciculata*, new combination, for *Polynoë aciculata* Moore.*

[*Macellicephala maculosa* TREADWELL] (1931, p. 313, fig. 1; U.S.N.M. 19543; Philippine Islands). See *Eupanthalis maculosa.**

Macellicephala remigata, new combination, for *Polynoë remigata* Moore.*

Malmgrenia nesiotes, new combination, for *Polynoë nesiotes* Chamberlin.*

[*Melaenis tropicus* TREADWELL] (1934, p. 1, pl. 1, figs. 1–6; U.S.N.M. no. 20031; Virgin Islands). See *Hermione tropicus.**

Nemidia microlepida MOORE (1910, p. 362, pl. 30, figs. 42–44, pl. 31, figs. 45, 46; U.S.N.M. no. 17113; California).

Panthalis adumbrata HOAGLAND (1920, p. 606, pl. 46, figs. 9–14; U.S.N.M. no. 18944; Philippine Islands).*

Panthalis evanida, new combination, for *Eupanthalis evanida* Treadwell.*

[*Panthalis oculea* TREADWELL] (1902, p. 188, figs. 14–18; U.S.N.M. no. 15961; Porto Rico). See *Polyodontes oculea.**

Panthalis panamensis CHAMBERLIN (1919a, p. 86, pl. 11, figs. 4–8; U.S.N.M. no. 19431; Panama).*

Plotolepis nans CHAMBERLIN (1919a, p. 40, pl. 7, figs. 3, 4; U.S.N.M. no. 19453; Easter Islands).

Podarmus ploa CHAMBERLIN (1919a, p. 45, pl. 6, fig. 6, pl. 7, figs. 1, 2; U.S.N.M. no. 19458; Easter Island).

[*Polynoë aciculata* MOORE] (1910, p. 367, pl. 31, figs. 57, 58; U.S.N.M. no. 17405; California). See *Macellicephala* (?) *aciculata.**

[*Polynoë alba* TREADWELL] (1906, p. 1149, figs. 4–6; U.S.N.M. no. 5201; Hawaiian Islands). See *Lepidasthenia alba.**

[*Polynoë branchiata* TREADWELL] (1902, p. 186, figs. 5–7; U.S.N.M. 16006; Porto Rico) is identical with *Chaetacanthus magnificus* (Grube) (see Seidler, 1924, p. 97).

Polynoë (?) *filamentosa* MOORE (1910, p. 366, pl. 31, figs. 52–56; U.S.N.M. no. 17221; California).*

Polynoë (?) *innatans* CHAMBERLIN (1919a, p. 70, pl. 8, figs. 1–7; U.S.N.M. no. 19459; near the Galapagos Islands).*

[*Polynoë lucida* TREADWELL] (1906, p. 1150, figs. 8–10; U.S.N.M. no. 5202; Hawaiian Islands). See *Lepidasthenia lucida.**

[*Polynoë mutilata* TREADWELL] (1906, p. 1152, figs. 12–15; U.S.N.M. no. 5204; Hawaiian Islands). See *Eupanthalis mutilata.**

[*Polynoë nesiotes* CHAMBERLIN] (1919a, p. 72, pl. 8, fig. 8, pl. 9, figs. 1–5; U.S.N.M. no. 19460; Lower California). See *Malmgrenia nesiotes.**

[*Polynoë nodosa* TREADWELL] (1902, p. 187, figs. 8, 9; U.S.N.M. no. 16014; Porto Rico) is identical with *Hermenia verruculosa* (Grube) (see Augener, 1925, p. 4, for synonymy).

[*Polynoë remigata* MOORE] (1910, p. 365, pl. 31, figs. 47–51; U.S.N.M. no. 17220; California). See *Macellicephala remigata.**

[*Polynoë renotubulata* MOORE] (1910, p. 368, pl. 31, figs. 59–64; U.S.N.M. no. 16878; California). See *Admetella renotubulata.**

[*Polynoë semierma* MOORE] (1903, p. 402; pl. 23, figs. 2, 3; U.S.N.M. no. 15738; Japan). See *Lepidasthenia interrupta.**

[*Polynoë spicula* TREADWELL] (1906, p. 1151, fig. 11; U.S.N.M. no. 5203; California). See *Lepidonotus caelorus.**

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